Claims

A method of synthesising a compound of formula I:

$$R^{N2}$$
 $N-R^{N1}$ (I)

5 comprising the step of reacting a moiety of formula II:

$$R^{N_1}$$
 (II)

with a moiety of formula III:

$$\begin{array}{c|c}
R^{N2} & R^1 \\
N - Si - R^2 & (III) \\
R^{N3} & R^3
\end{array}$$

in compressed carbon dioxide in the presence of a transition

10 metal catalyst and a base, wherein:

L is a labile leaving group;

 R^{N1} is optionally substituted $C_{5\text{--}20}$ aryl;

 R^{N2} is selected from optionally substituted C_{5-20} aryl, optionally substituted C_{3-20} heterocyclyl, optionally substituted C_{3-7} alkyl,

15 and optionally substituted sulfonyl;

 R^{N3} is selected from H and optionally substituted C_{1-7} alkyl, C_{3-20} heterocyclyl and C_{5-20} aryl; or

 R^{N2} and R^{N3} together with the nitrogen atom to which they are attached form optionally substituted nitrogen-containing $C_{3\text{--}20}$

- heterocylyl or C_{5-20} heteroaryl; and R^1 , R^2 and R^3 are independently selected from optionally substituted C_{1-7} alkyl, C_{5-20} aryl, C_{3-20} heterocyclyl, hydroxy, halo, amino and C_{1-7} alkoxy, or two of R^1 , R^2 and R^3 , together with the silicon atom to which they are attached, may form a
- 25 silicon containing C_{5-7} heterocyclyl group.
 - 2. A method according to claim 1, wherein the compressed carbon dioxide is supercritical carbon dioxide.
- 30 3. A method according to claim 1 or claim 2, wherein the transition metal catalyst is a palladium catalyst.

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4. A method according to claim 3, wherein the palladium catalyst comprises one or more phosphine ligands.

- 5. A method according to any one of claims 1 to 4, wherein the base is selected from group 1 metal carbonate and tert-butoxy/phenoxy bases.
 - 6. A method according to claim 6, wherein the base is Cs_2CO_3 .
- 7. A method according to any one of claims 1 to 6, wherein a fluoride source is present.
 - 8. A method according to claim 7, wherein the fluoride source is selected from KF and CsF.

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- 9. A method according to any one of claims 1 to 8, wherein the reaction is carried out at a temperature of between 20 and $200\,^{\circ}\text{C}$.
- 20 10. A method according to any one of claims 1 to 9, wherein the labile leaving group is selected from I, Br, Cl and OSO₂CF₃.
 - 11. A method according to any one of claims 1 to 10, wherein R^{N2} is selected from optionally substituted C_{5-20} aryl, optionally substituted C_{5-20} heterocyclyl, and optionally substituted sulfonyl.
- 12. A method according to any one of claims 1 to 11, wherein R^{N3} is selected from optionally substituted C_{1-7} alkyl, C_{3-20} 30 heterocylyl and C_{5-20} aryl.
 - 13. A method according to any one of claims 1 to 12, wherein R^1 , R^2 and R^3 are independently selected from optionally substituted C_{1-7} alkyl, C_{5-20} aryl, C_{3-20} heterocyclyl and C_{1-7} alkoxy, or two of R^1 , R^2 and R^3 , together with the silicon atom

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to which they are attached, may form a silicon containing $C_{5\mbox{--}7}$ heterocyclyl group.